

REMARKS/ARGUMENTS

Applicants respectfully request reconsideration of this application, as amended, and reconsideration of the Office Action dated March 26, 2006. Applicants request cancellation of claims 1-25, 28-31, 36-44 and 46 without prejudice. Claims 26, 27, 32, 45, 47 and 48 have been amended. Claims 51-56 are newly added dependent claims. Upon entry of this Amendment, claims 26, 27, 32-35, 45 and 47-56 will be pending in this application.

No new matter has been incorporated by this Amendment.

Applicants note that the amendment to the specification corrects paragraph 0064 of the published application consistent with the specification as originally filed.

With respect to amended claim 26, and without limitation, support for the amendment is found in the claims as originally presented, and as shown in FIGS. 2 and 3, and further described at paragraphs 0011, 0056, 0057 and 0063. Claim 27, depending from claim 26, and without limitation, is further supported by FIG. 5 and at paragraphs 0012 and 0072.

With respect to amended claim 32, and without limitation, support for the amendment is found in previously dependent claim 36 (now canceled) and at paragraphs 0033 and 0058.

With respect to amended claim 45, and without limitation, support for the amendment is found in previously dependent claim 46 (now canceled), and at FIGS. 2-4, 0057 and 0074. Claim 47 has been amended to change dependency upon independent claim 45.

With respect to amended claim 48, and without limitation, support for the amendment is found in the claims as originally presented and at paragraphs 0058 and 0060.

Newly added claims 51 and 53 are supported by the claims as originally presented.

Newly added claims 52 and 54-56 are supported at paragraph 0046, 0047 and 0057 of the specification.

Claims 26, 27, 45, 46 and 48-50 stand rejected as anticipated under 35 USC § 102(b) by U.S. Pat. No. 3,180,825 to Couvreur et al. Applicants respectfully traverse this rejection as Couvreur et al. does not teach or suggest any methods of the claimed invention relating to compressing any “compressible media” for filtering or filtering “solid particles” from a fluid.

Specifically, Couvreur et al. teaches uncompressed “filtration” that is actually an ion exchanger of incompressible “grained material” or “granules” for chemical reactions to exchange ions, such as for dehardening water or deionizing beet juice, see Couvreur et al. '825 at col. 1, line 17; col. 3, lines 19-22 and 72-75; col. 5, lines 29-34. Couvreur et al. teaches a two-step “filtration” process wherein liquid “to be treated” is passed downward through an uncompressed and expanded bed of granules and regeneration liquid (no filtering purpose) is passed upward when the case and bed are shrunk to encourage “regeneration” of the bed. See Couvreur et al. at claim 1; col. 2, lines 41-55.

Conversely, the claimed invention of all of amended claims 26, 27, 45 (claim 46 has been canceled) and 48-50 relates to “filtration” of “solids”, and includes the limitation of “removing solid particles” and compressing “compressible filter media” to encourage filtration wherein the media itself is “compressible”. Couvreur et al.’s incompressible granules for ion exchange have no application to the present invention, as the reference fails to teach any method for removing solid particles or any method with filter media itself being “compressible”. See also Couvreur et al. at col. 3, lines 72-75 (“care should also be taken that this pressure does not become such that the granules of which the bed is composed are damaged.”). Further, where Couvreur et al. teaches providing an expanded, uncompressed bed during chemical “filtration,” such teachings are opposite of the claimed steps of the claimed invention to compress filter media during filtering of solid particles.

Accordingly the '825 patent fails to teach all of the claimed elements of amended claims 26, 27, 45 and 48-50 and cannot anticipate the pending claims. Applicants respectfully request withdrawal of the rejections under §102 based on Couvreur et al..

Claims 26 and 27 stand rejected as anticipated under 35 USC § 102(b) by U.S. Pat. No. 4,851,136 to Fanqing et al. Because Fanqing et al. does not teach or suggest

a method including the limitation of compressing a flexible membrane and media with a “fluid to be filtered”, Applicants respectfully traverse this rejection.

Specifically, amended claims 26 and 27 (dependent of claim 26) include the limitations of providing “fluid to be filtered” one side of a membrane and compressible media on an opposite side of the membrane, compressing the membrane and media with “fluid to be filtered” from the first side, and further filtering “fluid to be filtered” on the second side. Fanqing et al. ‘136 fails to disclose any method for providing “fluid to be filtered” and compressing a flexible membrane with a “fluid to be filtered.” Instead, as shown in FIG. 1 of the ‘136 patent, and described at col. 4, line 65 to col. 5, line 2, Fanqing et al. teaches only pressurizing a pressure chamber (8) with no disclosure or suggestion of compressing with “fluid to be filtered” against a flexible membrane and also filtering the “fluid to be filtered”. As Fanqing et al. ‘136 fails to teach all of the elements of the claimed method, Applicants respectfully request withdrawal of the rejection under §102 based on Fanqing et al.

Claims 32-36 and 47 stand rejected under 35 USC § 103(a) as obvious over Couvreur et al. in view of U.S. Pat. No. 5,248,415 to Masuda et al. Couvreur et al. relates to methods for ion exchange based on chemical reactions with a granular media and Masuda et al. relates to filtering particulate with compressible media. Such references are thus clearly incompatible with one another. Accordingly, Applicants respectfully traverse this rejection of claims 32-35 (claim 36 is canceled) and claim 47 as those skilled in the art would not and could not combine the teachings of the cited references to arrive at the present invention.

Specifically, Couvreur et al. teaches an ion exchanger of incompressible, “grained material” or “granules” for chemical reactions to exchange ions such as for dehardening water or deionizing beet juice, see Couvreur et al. ‘825 at col. 1, line 17; col. 3, lines 19-22 and 72-75; col. 5, lines 29-34. Couvreur et al. also specifically teaches that Couvreur et al.’s chemical “filtration” occurs while a casing and bed is in an expanded position. See Couvreur et al. at claim 1. Masuda et al.’s ‘415 teaches an upflow particle filtration system wherein compressible filter media is compressed parallel to the flow. Couvreur et al.’s granular ion exchange bed wherein chemical treatment

occurs downward during expansion has no applicability to nor can be combined by those skilled in the art with Masuda et al.'s particulate filtration methods utilizing compressible media. Applicants respectfully point out that these cited references do not and are not "capable of filtering fluid in substantially the same manner. . . to produce substantially the same results" as suggested at page 3 of the Office Action. Clearly, there is no teaching, suggestion or motivation as to how or why those skilled in the art could replace Couvreur et al.'s incompressible granular bed for ion exchange with Masuda et al.'s compressible media for particle removal, without destroying the purposes and operation of either Couvreur et al. or Masuda et al.

In this regard, Couvreur et al. and Masuda et al. cannot be combined to arrive at amended claim 32 (and dependent claims 33-35), which provides for non-parallel compression of compressible filter media during filtering of fluid and removal of solid particles in a top to down direction of filtration through compressed media. Even if Couvreur et al.'s ion exchange bed of granules is somehow modified with Masuda et al.'s compressible media (improperly destroying any purpose of Couvreur et al.), Couvreur et al. teaches that any "filtration" is in an expanded and uncompressed bed, see e.g. Couvreur et al. at claim 1. Further, both references teach compression in an upflow direction (Couvreur et al. during regeneration and Masuda et al. during upflow filtration), not "top to down" filtering during compressing as set forth in the claimed invention.

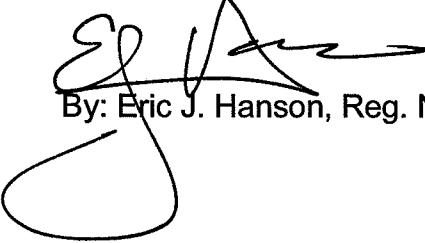
Further, claim 47, depending from amended independent claim 45, teaches non-parallel compression of compressible filter media during filtering of fluid and filtering to remove solid particles through compressed media with increased density of the media itself. Even if Couvreur et al.'s ion exchange bed of granules is somehow modified with Masuda et al.'s compressible media (improperly destroying any purpose of Couvreur et al.), Couvreur et al. teaches that any "filtration" is in an expanded and uncompressed bed, see e.g. Couvreur et al. at claim 1. Couvreur et al. also does not teach any steps for backwashing and circulating media, as the reference only teaches chemical regeneration of an ion exchange bed in a shrunken casing. These teachings are opposite of Masuda et al.'s disclosure and the claimed invention.

Because Couvreur et al. and Masuda et al. teach different and incompatible processes and cannot be combined to arrive at the methods of Applicant's amended claims, Applicant's claims are novel and non-obvious over the combination of the cited references. Withdrawal of the rejections under §103 is respectfully requested.

In view of the foregoing remarks, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

If any additional fees are due in connection with the filing of this Amendment, the accompanying papers, or otherwise unaccounted for in subsequent prosecution of this application please charge the fees to SGR Deposit Account No. 02-4300, Order No. 042716.005. If an additional extension of time under 37 C.F.R. §1.136 is necessary that is not accounted for in the papers filed herewith, such an extension is requested. The additional extension fee should also be charged to SGR Deposit Account No. 02-4300, Order No. 042716.005. Any overpayment can be credited to Deposit Account No. 02-4300, Order No. 042716.005.

Respectfully submitted,



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